

Decompression sickness presenting as breast pain, edema, and rash



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Background:

- Breast complaints are rarely reported as a diving complication
- We report a case of breast pain and dermatologic changes after diving which resolved after hyperbaric oxygen (HBO) treatment

Case Report:

- A 49-year old female went on a seven-day Caribbean diving vacation sponsored by her local dive shop
- Her dive profiles are shown in Table 1
- She experienced left breast pain after her third dive each day on days 3 and 4 of her trip
- On day 5, she noticed left breast pain, edema, and a rash after her first dive; she did not complete additional dives that day
- On day 7, she experienced left arm paresthesias after flying home
- She called DAN, who referred her for HBO₂T evaluation
- On presentation to our HBO₂T center, she had edema, erythema, and a lacy rash present over her left breast; neurological exam was normal
- Recompression was performed with a USN TT6, after which she reported dramatic improvement in symptoms
- She was then treated with 3 additional standard wound healing treatments (2.2 ATA, 90 minutes at 100% O₂); after the last treatment, her pain, erythema, edema, and rash had almost completely resolved
- At one-week follow up, she reported no additional symptoms
- Transthoracic echocardiography with bubble study demonstrated the presence of a small PFO



Figure 1: left breast edema and erythema



Figure 2: cutis marmorata type rash over anterior left breast

Discussion:

- Lymphatic obstruction of breast tissue by nitrogen bubbles may represent the etiology of breast symptoms after diving
- One prior case series reported breast pain as the initial presenting symptoms of decompression sickness (DCS) in two female patients¹

Conclusion:

- Breast pain and edema after diving may represent DCS
- Immediate HBO₂T evaluation is indicated for patients exhibiting such symptoms

¹Trevett AJ, Sheehan C, Forbes R. Decompression illness presenting as breast pain. Undersea Hyperb Med 2006;33(2):77-79

Table 1: Daily dive profiles and symptoms

Day of Trip	Dive Profile	Symptoms
1	Shallow water "acclimation" dive	None
2	60 FSW x 60 min, then SI (surface interval) 60 min 50 FSW x 60 min, then SI 210 min 60 FSW x 60 min	None
3	60 FSW x 60 min, then SI 60 min 50 FSW x 60 min, then SI 210 min 60 FSW x 60 min	Left breast pain after third dive which resolved by the morning of day #4
4	60 FSW x 60 min, then SI 60 min 50 FSW x 60 min, then SI 210 min 60 FSW x 60 min	Left breast pain after third dive which resolved by the morning of day #5
5	60 FSW x 60 min	Left breast pain, edema, rash; did not perform second and third dives that day due to symptoms
6	None	Continued left breast pain, edema, rash
7	Commercial air travel home	Continued left breast pain, edema, rash; L arm paresthesias after returning home